

# Missouri Department of Natural Resources



## PUBLIC NOTICE

### DRAFT MISSOURI STATE OPERATING PERMIT

DATE: September 15, 2006

In accordance with the state Clean Water Law, Chapter 644, RSMo, Clean Water Commission regulation 10 CSR 20-6.010, and the federal Clean Water Act, the applicants listed herein have applied for authorization to either discharge to waters of the state or to operate a no-discharge wastewater treatment facility. The proposed permits for these operations are consistent with applicable water quality standards, effluent standards and/or treatment requirements or suitable timetables to meet these requirements (see 10 CSR 20-7.015 and 7.031). All permits will be issued for a period of five years, unless noted otherwise in the Public Notice for that discharge.

On the basis of preliminary staff review and the application of applicable standards and regulations, the Missouri Department of Natural Resources (MDNR), as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions. The proposed determinations are tentative pending public comment.

Persons wishing to comment on the proposed permit conditions are invited to submit them in writing to the Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, Missouri 65102, ATTN: NPDES Permits and Engineering Section / Permit Comments. **Please include the permit number in all comment letters.**

Comments should be confined to the issues relating to the proposed action and permit(s) and the effect on water quality. The MDNR may not consider as relevant comments or objections to a permit based on issues outside the authority of the Clean Water Commission, (see Curd v. Mo. Clean Water Commission, 586 S.W.2d 58 Mo. App. 1979).

All comments must be postmarked by October 15, 2006 or received in our office by 5:00 p.m. on October 18, 2006. The requirement of a signed document makes it impossible to accept email comments for consideration at this time. Comments will be considered in the formulation of all final determinations regarding the applications. If response to this notice indicates significant public interest, a public meeting or hearing may be held after due notice for the purpose of receiving public comment on the proposed permit or determination. Public hearings and/or issuance of the permit will be conducted or processed according to 10 CSR 20-6.020.

Copies of all draft permits and other information including copies of applicable regulations are available for inspection and copying at DNR's website, <http://www.dnr.mo.gov/env/wpp/index.html>, or at the Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, Missouri 65102, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday.

Public Notice Date: September 15, 2006

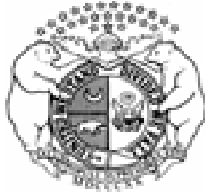
Permit Number: MO-0000337

Southeast Regional Office

FACILITY NAME AND ADDRESS	NAME AND ADDRESS OF OWNER
Buick Resource Recycling Facility HC1, Box 1395, Highway KK, Boss, MO 65440	Buick Resource Recycling Facility, LLC HC1, Box 1395, Highway KK, Boss, MO 65441
RECEIVING STREAM & LEGAL DESCRIPTION	TYPE OF DISCHARGE
<b>Receiving Stream:</b> Unnamed Tributary of Crooked Creek (U) <b>Legal Description:</b> NW ¼, SW ¼, Sec. 14, T34N, R2W, Iron County	

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT**

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92<sup>nd</sup> Congress) as amended,

Permit No. MO-0000337

Owner: Buick Resource Recycling Facility, LLC  
Address: HC1, Box 1395, Highway KK, Boss, MO 65441

Continuing Authority: Same as above  
Address: Same as above

Facility Name: Buick Resource Recycling Facility  
Address: HC1, Box 1395, Highway KK, Boss, MO 65440

Legal Description: NW ¼, SW ¼, Sec. 14, T34N, R2W, Iron County

Receiving Stream: Unnamed Tributary of Crooked Creek (U)  
First Classified Stream and ID: Crooked Creek (P)(01928)  
USGS Basin & Sub-watershed No.: (07140102-030002)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

**FACILITY DESCRIPTION**

See page 2

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

August 23, 2002

Effective Date

Revised

\_\_\_\_\_  
Doyle Childers, Director, Department of Natural Resources  
Executive Secretary, Clean Water Commission

August 22, 2007

Expiration Date  
MO 780-0041 (10-93)

\_\_\_\_\_  
Edward Galbraith, Director of Staff, Clean Water Commission

FACILITY DESCRIPTION (continued)

Outfall #001 – Industry – SIC #3341 - Industrial process wastewater, process stormwater, leachate from slag landfill, purge water from groundwater well sampling, and primary treated sanitary wastewater is treated in a wastewater plant with a design capacity of 950,000 gallons per day. The treatment consists of the following unit processes:

1. Physical settling in the six million gallon concrete impoundment which receives stormwater, process wastewater, treated sanitary wastewater, and process stormwater pumped from an earthen impoundment.
2. The wastewater is pumped into wastewater treatment plant.
3. Chemical addition for coagulation and sedimentation of insoluble heavy metals.
4. pH adjustment
5. Belt filtration
6. Pressure sand filters before discharge.

Design flow is 0.95 MGD.

Outfall #002 – Industry – SIC #3341 – Stormwater runoff/settling basin/storm emergency overflow – Emergency overflow of concrete holding basin, physical settling.

Outfall #003 – Industry – SIC #3341 – Stormwater runoff/settling basin/storm emergency overflow – Emergency overflow of concrete holding basin, physical settling.

Outfall #004 – Industry – SIC #3341 – In-stream compliance point – located at the low water bridge crossing Crooked Creek in the NW ¼, Sec. 31, R2W, Crawford County.

The industrial population of this facility is approximately 215 employees. The sanitary waste from the lunchroom, hand wash sinks, and toilets is discharged to a two cell aerated biological treatment lagoon. In addition, a separate system using a septic tank serves the change house, showers, employee respirator wash and hand wash sinks which is discharged to the same two cell aerated biological treatment lagoon. The treatment lagoon discharges directly into the stormwater concrete holding basin, which will receive further treatment as described under Outfall #001.

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 3 of 8	
					PERMIT NUMBER MO-0000337	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	MGD	*		*	once/weekday	24 hr. total
pH – Units	SU	**		**	once/month	grab
Total Suspended Solids	lbs/day	283		162	once/month	***
Arsenic, Total Recoverable	lbs/day	3.34		1.70	once/month	***
Cadmium, Total Recoverable	lbs/day	1.84		0.74	once/month	***
	mg/L	0.100				
Copper, Total Recoverable	lbs/day	2.420		1.550	once/month	***
	mg/L	0.088			once/month	***
Lead, Total Recoverable	lbs/day	2.58		1.05	once/month	***
	mg/L	0.190			once/month	***
Zinc, Total Recoverable	lbs/day	9.38		3.07	once/month	***
	mg/L	2.120			once/month	***
Antimony, Total	lbs/day	6.900		4.600	once/month	***
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2002</u> .						
Silver	mg/L	0.013			once/quarter****	24 hr.
Whole Effluent Toxicity (WET) Test	% Survival	See Special Conditions			once/quarter****	24 hr. composite
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2003</u> .						
Ammonia	mg/L	16.1			once/quarter****	grab
Biochemical Oxygen Demand	mg/L		45	30	once/quarter****	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>January 28, 2003</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I &amp; III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 4 of 8	
					PERMIT NUMBER MO-0000337	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #002 &amp; #003</u>						
Rainfall	inches/ day	*		*	once/day*****	24 hr. total
Flow	MGD	Note 1			once/month*****	24 hr. total
pH – Units	SU	Note 1			once/month*****	***
Total Suspended Solids	lbs/day	Note 1			once/month*****	***
Arsenic, Total Recoverable	lbs/day	Note 1			once/month*****	***
Cadmium, Total Recoverable	lbs/day	Note 1			once/month*****	***
Copper, Total Recoverable	lbs/day	Note 1			once/month*****	***
Lead, Total Recoverable	lbs/day	Note 1			once/month*****	***
Zinc, Total Recoverable	lbs/day	Note 1			once/month*****	***
Antimony, Total	lbs/day	Note 1			once/month*****	***
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2002</u> .						
Silver	mg/L	0.013			once/quarter****	24 hr.
Whole Effluent Toxicity (WET) Test	%Survival	See Special Conditions			once/quarter****	24 hr. composite
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2003</u> .						
<u>Outfall #004 – Downstream Compliance Point</u>						
Flow	MGD	*		*	once/month	24 hr. estimate
Lead, Dissolved	µg/L	29		29	once/month	grab
Zinc, Dissolved	µg/L	440		440	once/month	grab
Copper, Dissolved	µg/L	37		37	once/month	grab
Arsenic, Dissolved	µg/L	20		20	once/month	grab
Cadmium, Dissolved	µg/L	17		17	once/month	grab
Antimony, Dissolved	µg/L	600		600	once/month	grab
Sulfate	µg/L	*		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2002</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I &amp; III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- \* Monitoring requirement only.
- \*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 7.5-10.0 pH units.
- \*\*\* A composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.
- \*\*\*\* Sample once per quarter in the months of February, May, August & November.
- \*\*\*\*\* Each discharge event.

Note 1 – No discharge is authorized unless the combined flows of Outfalls #001, #002 & #003 meet all limitations of Outfall #001.

C. SCHEDULE OF COMPLIANCE

1. A report will be submitted within 90 days outlining the steps which will be taken to eliminate the toxic components identified in the toxicity identification evaluation (TIE). Included in the report will be the design basis for a wetland treatment system or equivalent treatment system to be added to the existing wastewater treatment process.
2. Plans specifications and a construction permit application for the waste water treatment process improvements shall be submitted by December 31, 2002.
3. Construction of the wastewater treatment improvements shall be completed by December 31, 2004.
4. By May 1, 2005, a Whole Effluent Toxicity (WET) test will be conducted to demonstrate that the wastewater improvements have met the PASS/Fail Procedure and effluent limitations listed below.

D. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
2. All outfalls must be clearly marked in the field.
3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.
4. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - (1) One hundred micrograms per liter (100 µg/L);
  - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
  - (4) The level established in Part A of the permit by the Director.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

D. SPECIAL CONDITIONS (continued)

5. Report as no-discharge when a discharge does not occur during the report period.
6. General Criteria. The following water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
  - (a) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
  - (b) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
  - (c) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
  - (d) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
  - (e) There shall be no significant human health hazard from incidental contact with the water;
  - (f) There shall be no acute toxicity to livestock or wildlife watering;
  - (g) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
  - (h) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities
  - (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
  - (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.
8. Whole Effluent Toxicity (WET) tests will be conducted as follows.

SUMMARY OF WET TESTING FOR THIS PERMIT				
OUTFALL	A.E.C. %	FREQUENCY	SAMPLE TYPE	MONTH
#001	100%	Quarterly	24 hr. composite	February, May, August and November

(a) Test Schedule and Follow-Up Requirements

- (1) Perform a single-dilution test in the months and at the frequency specified above.

If the effluent passes the test, do not repeat the test until the next test period. Submit results with the annual report. If the effluent fails the test, a multiple dilution test shall be performed within 30 days, and biweekly thereafter, until one of the following conditions are met:

- (a) THREE CONSECUTIVE MULTIPLE-DILUTION TEST RESULTS PASS. No further tests need to be performed until next regularly scheduled test period.
  - (b) A TOTAL OF THREE MULTIPLE-DILUTION TEST RESULTS FAIL.
- (2) The permittee shall submit a summary of all test results for the test series to the WPCP, Planning Section, P.O. Box 176, Jefferson City, MO 65102 within 14 days of the third failed test.
  - (3) A revised WET test schedule may be established by DNR for this period.



D. SPECIAL CONDITIONS (continued)

- (4) Since a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
- (5) In addition to the WET test summary report required in part (2), all failing test results shall be reported to DNR within 14 days of the availability of the results.
- (6) All WET test results for the reporting period shall be summarized and submitted to DNR by the end of the following October. When WET test sampling is required to run over one DMR period, each DMR report shall contain information generated during the reporting period.

(b) PASS/FAIL procedure and effluent limitations

- (1) To pass a single-dilution test, mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level;  $p = 0.05$ ) than that observed in the upstream receiving-water control sample. The appropriate statistical tests of significance will be those outlined in the most current USEPA acute toxicity manual or those specified by the MDNR.
- (2) To pass a multiple-dilution test:
  - (a) the computed percent effluent at the edge of the zone of initial dilution, Acceptable Effluent Concentration (AEC), must be less than three-tenths (0.3) of the  $LC_{50}$  concentration for the most sensitive of the test organisms; or,
  - (b) all dilutions equal to or greater than the AEC must be nontoxic. Failure of one multiple-dilution test is an effluent limit violation.

(c) Test Conditions

- (1) Test species: *Ceriodaphnia dubia* and *Pimephales promelas* (fathead minnow). Organisms used in WET testing should come from cultures reared for the purpose of conducting toxicity tests and should be cultured in a manner consistent with the most current USEPA guidelines. All test animals should be cultured as described in EPA-600/4-90/027.
- (2) Test period: 48 hours at the "Acceptable Effluent Concentration" (AEC) specified above.
- (3) When dilutions are required, upstream receiving stream water must be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water must be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR.
- (4) Tests should be initiated immediately after the sample is collected, but tests must be initiated no later than 36 hours after sample collection.
- (5) Single-dilution tests must be run with:
  - (a) Effluent at the AEC concentration;
  - (b) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
  - (c) reconstituted water.
- (6) Multiple-dilution tests must be run with:
  - (a) 100%, 50%, 25%, 12.5%, and 6.25% effluent, unless the AEC is less than 25% effluent, in which case dilutions will be 4 times the AEC, two times the AEC, AEC, 1/2 AEC and 1/4 AEC;
  - (b) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
  - (c) reconstituted water.
- (7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test must be re-run.

## SUMMARY OF TEST METHODOLOGY FOR WHOLE-EFFLUENT TOXICITY TESTS

Whole-effluent-toxicity test required in NPDES permits shall use the following test conditions when performing single or multiple dilution methods. Any future changes in methodology will be supplied to the permittee by the Missouri Department of Natural Resources (MDNR). Unless otherwise specified by MDNR, procedures should be consistent with Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA/600/4-90/027.

### Test conditions for Ceriodaphnia dubia:

Test duration:	48 h
Temperature:	25 ± 2 °C
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light, 8 h dark
Size of test vessel:	30 mL (minimum)
Volume of test solution:	15 mL (minimum)
Age of test organisms:	<24 h old
No. of animals/test vessel:	5
No. of replicates/concentration:	4
No. of organisms/concentration:	20 (minimum)
Feeding regime:	None (feed prior to test)
Aeration:	None
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Mortality (Statistically significant difference from upstream receiving water control at p 0.05)
Test acceptability criterion:	90% or greater survival in controls

### Test conditions for Pimephales promelas:

Test duration:	48 h
Temperature:	25 ± 2 °C
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light/ 8 h dark
Size of test vessel:	250 mL (minimum)
Volume of test solution:	200 mL (minimum)
Age of test organisms:	1-14 days (all same age)
No. of animals/test vessel:	10
No. of replicates/concentration:	4 (minimum) single dilution method 2 (minimum) multiple dilution method
No. of organisms/concentration:	40 (minimum) single dilution method 20 (minimum) multiple dilution method
Feeding regime:	None (feed prior to test)
Aeration:	None, unless DO concentration falls below 4.0 mg/L; rate should not exceed 100 bubbles/min.
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Mortality (Statistically significant difference from upstream receiving water control at p 0.05)
Test Acceptability criterion:	90% or greater survival in controls